

REMARKS

Claims 1-11 are now pending in the application. Claims 12-14 have been added as new. The basis for the amendment and support for the new claims can be found throughout the application, claims and drawings as originally filed and as such no new matter has been presented. The amendments to the claims contained herein are of equivalent scope as originally filed and, thus, are not a narrowing amendment. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 112

Claims 1-11 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point and distinctly claim the subject matter which Applicant regards as the invention. This rejection is respectfully traversed.

Claims 1, 4 and 8 have been amended to clarify that the first cord is disposed inward of the second cord, eliminating the confusion suggested by the Examiner. Therefore, Applicant respectfully requests removal of this rejection.

REJECTION UNDER 35 U.S.C. § 103

Claims 1-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hirtreiter et al. (U.S. Pat. No. 3,897,941, hereinafter "Hirtreiter"). Claim 11 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Hirtreiter in view of Crabtree (U.S. Pat. No. 4,763,883, hereinafter "Crabtree"). These rejections are respectfully traversed.

Applicant respectfully disagrees with the Examiner's conclusion regarding torsion strain. As to amended claims 1 and 7, Hirtreiter does not appear to teach a torsional

strain less than approximately 0.5°. Hirtreiter appears to disclose an air spring having three layers of cords (9, 15, 17), for example see Figures 1, 4, 8, 11, 12, 14 and 15. Alternatively, Hirtreiter appears to teach four layers of cords (9, 17), for example see Figures 10 and 13. Hirtreiter does not appear to teach a first and second cord layer having the desirable torsional strain range derived from the inventive arrangement of the cord bias angles.

The Examiner suggests that torsional strain is a measure of air spring rigidity. However, no citations or references are offered to support this proposition. Hirtreiter does not appear to offer any teaching as to the torsional behavior of the cited prior art air spring. In fact, Hirtreiter appears to assume no torsional behavior at all since the air spring is bolted to a suspension system using threaded studs, col. 7, lines 42-43.

It appears that any rigidity taught in Hirtreiter is derived from the plies of brass coated high carbon steel cables (16, 17), col. 10, lines 17-18 and 28-29 and col. 5, lines 5-18. "Rigid" appears to be defined in Hirtreiter as axial rigidity and is determined based upon an axial (or compressive) distortion or deformation of the connecting portion (13) of the member, col. 7, lines 19-24, col. 11, lines 4-12 and col. 7, lines 25-33. To establish this axial rigidity Hirtreiter appears to teach that solid rigid elements such as straight or crimped metal rods, bars or slats may be embedded in the wall, col. 5, lines 19-36, in addition to the steel cables. However, the steel cables or metal rods do not appear to extend the entire length of the air spring, col. 5, lines 27-32. Instead, they only appear to be used in the connecting portion (13) which is disposed therebetween, but is not part of, the rolling lobes (flexing portion (11)), col. 4, lines 42-53 and col. 7, lines 34-40.

Torsional strain is a different matter that relates to the relative angular rotation of the pistons (32). No mention is made in Hirtreiter of the torsional strain behavior of the disclosed multiple layer, metal reinforced construction.

Applicant respectfully asserts that the axial rigidity is not indicative or conclusive of the suggested torsional strain behavior of the Hirtreiter air spring, if any. No citation is offered by the Examiner to support this argument. Therefore, the limitation does not appear to be taught by Hirtreiter.

Applicant notes that claims 2-3, 5-6 and 9-11 depend from claims 1, 4 and 7, respectively, and are therefore in condition for allowance for the reasons set forth above. As such, reconsideration and withdrawal of the rejection of claims 1-11 are respectfully requested.

NEW CLAIMS

Claims 12, 13 and 14 have been added as new. It should be noted that claims 12, 13 and 14 depend from claims 1, 4 and 7 respectively. As such, claims 12, 13 and 14 should be in condition for allowance for the reasons set forth above regarding claim 1 as well as the additional features of claim 12, 13 and 14.

Specifically, claims 12-14 include the distinction that the first and second cords have a similar structure. The Examiner appears to use cords having significant structural differences when evaluating the angular disposition of the two cords of the present invention in view of Hirtreiter. In col. 8, lines 7-11, Hirtreiter states:

"cords 17 may be disposed at an angle from about 40 to about 50 and the cords 9 may be disposed at an angle from about 50 to 60 each with respect to the imaginary line on the surface of the member."

Hirtreiter defines these different cords (9, 17) as having significantly different structures at col. 5. lines 5-9, stating:

"[i]t is preferred that each of the elements 17 of the reinforcement be a relatively thin flexible cord or cable composed of strands of high modulus metal filaments being generally less flexible than the tensile resisting cords 9."

Applicant respectfully disagrees with the Examiner's conclusion that Hirtreiter discloses different cord angles in a manner similar to that disclosed in the present invention. Therefore, Applicant believes that the present invention further distinguishes from Hirtreiter for the reasons stated above.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (734) 354-5445.

Respectfully submitted,

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